MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2018/2019

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences)

28 May 2019
2.30 – 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **ALL** questions.
3. Write your answers in the Answer Booklet.

Instructions: Answer **ALL** questions. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

a. RFID scanner is a device that reads printed text and graphic layout and transforms them into a computer readable form. Explain briefly the RFID technology and give **TWO (2)** advantages of the RFID technology.

(3 marks)

b. Computer processor, also known as CPU, interprets computer's instruction or program into tasks. Describe the major components of the CPU.

(3 marks)

c. Computer storage such as flash storage is a medium for storing data, information, programs, and applications. What is enterprise storage?

(2 marks)

d. Varieties of computer applications are being developed by many companies around the world. These applications perform variety of tasks or jobs to help human's daily routines and company's task. List **TWO (2)** characteristics of open source software.

(2 marks)

QUESTION 2 [10 Marks]

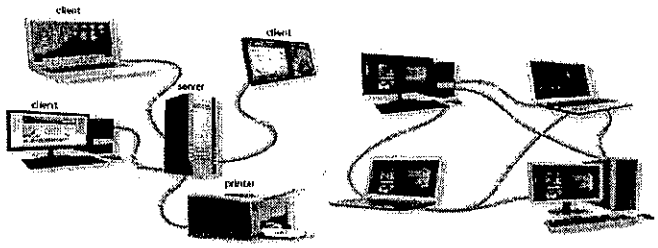

Figure 1

a. By referring to the above **Figure 1**, list **TWO (2)** differences between client/server and peer-to-peer networks.

(3 marks)

b. Explain the difference between an IP address and a domain name. List **ONE (1)** popular top level domain.

(2 marks)

c. A computer database system allows departments to keep its own set of data securely, while at the same time allows some of them to be shared by others. List **THREE (3)** disadvantages of a database approach.

(3 marks)

Continued...

d. System Development Life Cycle (SDLC) is an approach for software developer. It has series of activities or phases to follow during the development for better software quality and standard. List **FOUR (4)** phases used in the SDLC.

(2 marks)

QUESTION 3 [10 Marks]

a. Multimedia is referred to a combination use of text, image, graphic, animation, sound and video. The use of multimedia in computer applications can improve interaction tremendously. Explain the infographic concept.

(2 marks)

b. Vector-based images are composed of key points and paths, which define shapes, and coloring instructions, such as line and fill colors. Give **TWO (2)** advantages of vector-based images.

(2 marks)

c. Digital security risk is any event or action that could cause a loss of or damage to a computer or mobile device hardware, software, data, information, or processing capability. Define spoofing technique.

(2 marks)

d. Information privacy refers to the right of individuals and companies to deny or restrict the collection, use, and dissemination of information about them. Differentiate between unauthorized access and unauthorized use and list **TWO (2)** measures that organization take to prevent unauthorized access and use.

(4 marks)

QUESTION 4 [10 Marks]

a. Some input devices save users time by capturing data directly from source document, which is the original form of data. Devices that can capture data directly from a source document include magnetic-ink character recognition (MICR) and optical mark recognition (OMR). Differentiate between magnetic-ink character recognition (MICR) and optical mark recognition (OMR).

(2 marks)

b. What is the difference between nonimpact printers and impact printers?

(2 marks)

c. Most of today's computers use cache which is a small-sized type of volatile computer memory. Explain how it helps to speed up processes of the computer.

(2 marks)

d. Operating system (OS) is a set of programs containing instructions that work together to coordinate all the activities among computer hardware resources. Explain **FOUR (4)** functions of an operating system.

(4 marks)

Continued...

QUESTION 5 [10 marks]

a. Database management system provides several tools that allow users and programs to retrieve and maintain data in the database. Discuss **TWO (2)** benefits of the primary key in the database.

(2 marks)

b. Explain briefly the difference between programing language and procedural language.

(2 marks)

c. A multimedia application involves the use of multimedia technology for business, education and entertainment. Define the terms below:
   i. augmented reality
   ii. virtual reality

(3 marks)

d. Information theft occurs when someone steals personal or confidential information. Explain the terms below:
   i. encryption
   ii. digital signature
   iii. digital certificate

(3 marks)

End of Paper